

StoSS *landscape urbanism*

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silresim superfund redevelopment study . tanner street initiative
lowell . massachusetts

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**Remediation is an opportunity for investigation,
revelation, regeneration, and recovery...**



**...a chance to change public PERCEPTION
by providing ACCESS to and PARTICIPATION in
the remediation process...**

A photograph of a winter landscape. The foreground is covered in a thick layer of snow. In the middle ground, there are several bare, snow-laden trees. In the background, industrial structures are visible, including a tall, white smokestack and a yellow building. The sky is a pale, overcast blue.

**...and to a site full of delicate yet resilient ecologies,
powerful and innovative technologies,
and meaningful social histories.**

silresim superfund redevelopment study . lowell, massachusetts



The contingencies of remediation timelines, changing technologies, uncertain economics, and fluid politics demand an alternative to typical master planning processes. Such processes tend to focus on a singular development plan for an ill-defined future, after environmental remediation is complete. Moreover, obfuscation becomes the norm during remediation processes: people are kept out, the site is fenced off and buried under a clay cap. Such a generic approach tends to amplify any sense of darkness or dereliction that has come to hang over a place, reinforcing a community's physical and psychological disconnect from the site and its important and potentially instructive histories.

*For the Silresim Superfund Site and surrounding Tanner Street Corridor in historic Lowell, Massachusetts, such a planning process would yield a plan for a future too distant, too removed from the contemporary condition so as to render it useless. The EPA has been at work diligently for the past two decades on the Silresim Site and continues to refine its technologies in order to best deal with extensive environmental contamination and remediation issues. Though progress is slow, it is steady. The EPA currently estimates that soil remediation could be complete in the 5-10 years, while the pump-and-treat facility for contaminated groundwater will continue to operate for the next 25 years. Thus, to develop a rigid planning document **now** for a period **25 years in the future**, a period with radically different economies and technologies, would surely be an academic exercise only; it would miss potential opportunities for engaging the community in more gradual and grounded transformations of a diverse and potentially rich piece of their urban and social fabric.*

This document outlines an alternative approach to brownfield and Superfund site remediation and redevelopment, one that offers a fuller environmental, ecological, economic, social, cultural, and civic recovery grounded in a wider array of issues and opened to a broader set of constituencies than typical economic redevelopment plans. Here, the redevelopment study is used as a vehicle for engaging communities and stakeholders, for changing perceptions, for initiating processes of transformation that unfold over a period of years, starting with the remediation process. The proposals contained herein set in motion a series of short-, medium-, and long-term strategies for the recovery of the Silresim Superfund Site, including temporary events, physical catalysts, and new environmental frameworks. They lay the groundwork for extensive private reinvestment in the district, which would allow for business expansion and redevelopment. They put in place innovative but not untested ecological technologies that can solve infrastructural needs while improving image, environmental health, social/recreational opportunities, and economic potential. And they invoke a broad array of potential stakeholders—public, private, and institutional entities that can be drawn into a variety of strategic coalitions according to the specific goals and sub-projects in the works.

Most importantly, this document establishes the basis for creative partnerships between public and private sectors, City administration and neighbors, business owners and the community, potential developers and local organizations—partnerships that can draw on an expanded body of knowledge and resources and can collectively and steadily move forward the broad principles of the plan.

The momentum for the project is already building. The City organized a series of Community Advisory Board (CAB) meetings beginning in April 2001 and extending into the spring of 2002; this group brought together current business owners along Tanner Street, representatives from the EPA and its public and private consultants, the Commonwealth of Massachusetts, and local residents from the adjacent Sacred Heart Neighborhood. In addition, an extensive series of private interviews, small meetings, and directed focus groups were held, some in conjunction with the advising and market research firm Versar, Inc., throughout the course of the planning process. These sessions opened the process to local lenders and developers, politicians and neighbors, business and community leaders, representatives from local environmental and cultural organizations, educators and institutional leaders, and the general public. A City-Wide Advisory Committee was also formed to provide broader oversight of and input into the planning process; it consisted of representatives from the City of Lowell; the Lowell City Council; the National Park Service; the Lowell Plan; the LDFC; the University of Massachusetts; the Sacred Heart Neighborhood Association; the Tanner Street Community Advisory Board; and others. Finally, parts of the proposed plan have been presented to various community groups and city agencies, in order to test proposals and determine potential support for the projects. These included the Cultural Organization of Lowell; Lowell the Flowering City; the Environmental Protection Agency; the Commonwealth of Massachusetts Department of Environmental Protection; representatives from the Lowell School Department; and the Lowell Regional Wastewater Utility, among others.

To date, all groups that have participated in and reviewed the proposed plan and its various components have voiced overwhelming support for the ideas and frameworks contained herein. Importantly, they have stated and demonstrated their willingness to participate in this process, offering ideas for kick-off events and long-term public and educational workshops that could be staged in and around the site. Such eagerness and engagement can only promise a richer future for the district and for the community at large.

In sum, rather than narrowly defining an environmental problem that needed to be solved or focusing on a single economic goal, we chose to broaden the context and re-define the project according to a more complex (and accurate) reading of site conditions and contexts. In doing so, it became clear that the route to a successful and engaging recovery effort should embrace complexities and open the process to a wide range of economic, environmental, and social-cultural forces. The goal has been initiating change and recovery rather than advocating a particular long-term (economic development) outcome; the key was to embrace and engage remediation in process, using the concentration of resources being devoted to the Superfund site as a departure point for imagining not one, but a series of fuller and richer futures for the community. Importantly, these futures are directed but not restrictive, inclusive but not unstructured. Our hope is that urbanistic, ecological, social-cultural, and economic adaptation will ensue.

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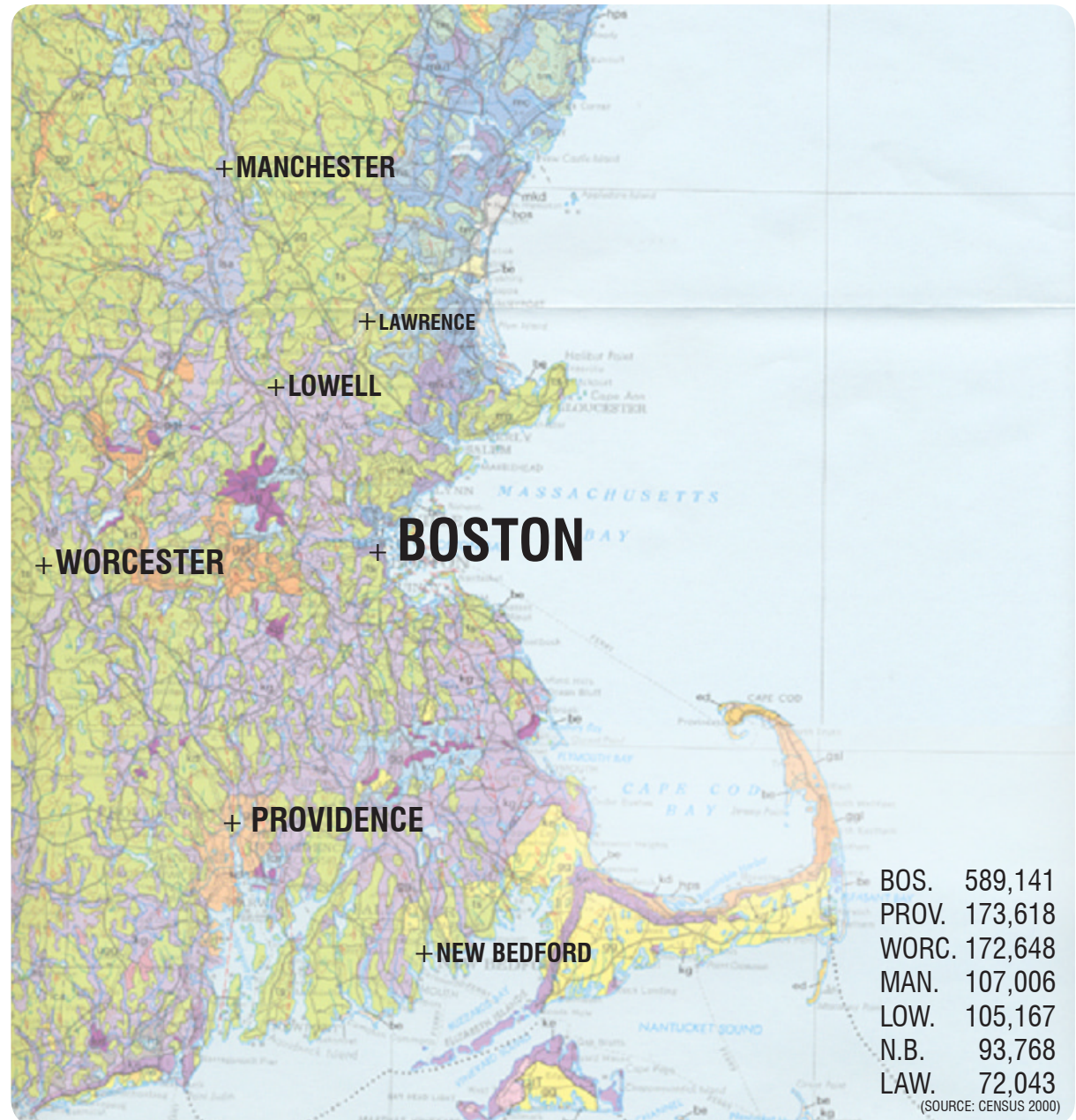
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1.1.1 Regional Context

The City of Lowell is located in the Merrimack River Valley in northeastern Massachusetts, about 30 miles northwest of Boston. According to the 2000 US Census, Lowell is the fourth-largest city in the state, behind Boston, Worcester, and Springfield.

Lowell is connected to regional and national interstate highway systems via the Lowell Connector, Route 3, and Interstate 495, all of which pass through its borders. This system provides good transportation connections to Lowell and easy access to Boston's Logan International Airport, and to national and regional airports in Worcester, MA; Manchester, NH; and Providence, RI.



1.1.2 Connective Networks

The Tanner Street Corridor and Silresim Superfund Site are located just south of the center of Lowell, in Ayer's City. The district lies adjacent to the Lowell Connector, the Boston & Maine Railroad (which carries the MBTA commuter rail), and the River Meadow Brook (which connects to the Concord and Merrimack Rivers). These adjacencies make the Corridor unique within the City, as no other district possesses a similar combination of freight and commuter transportation infrastructures, ecological resources, and potential identity / city gateway opportunities.



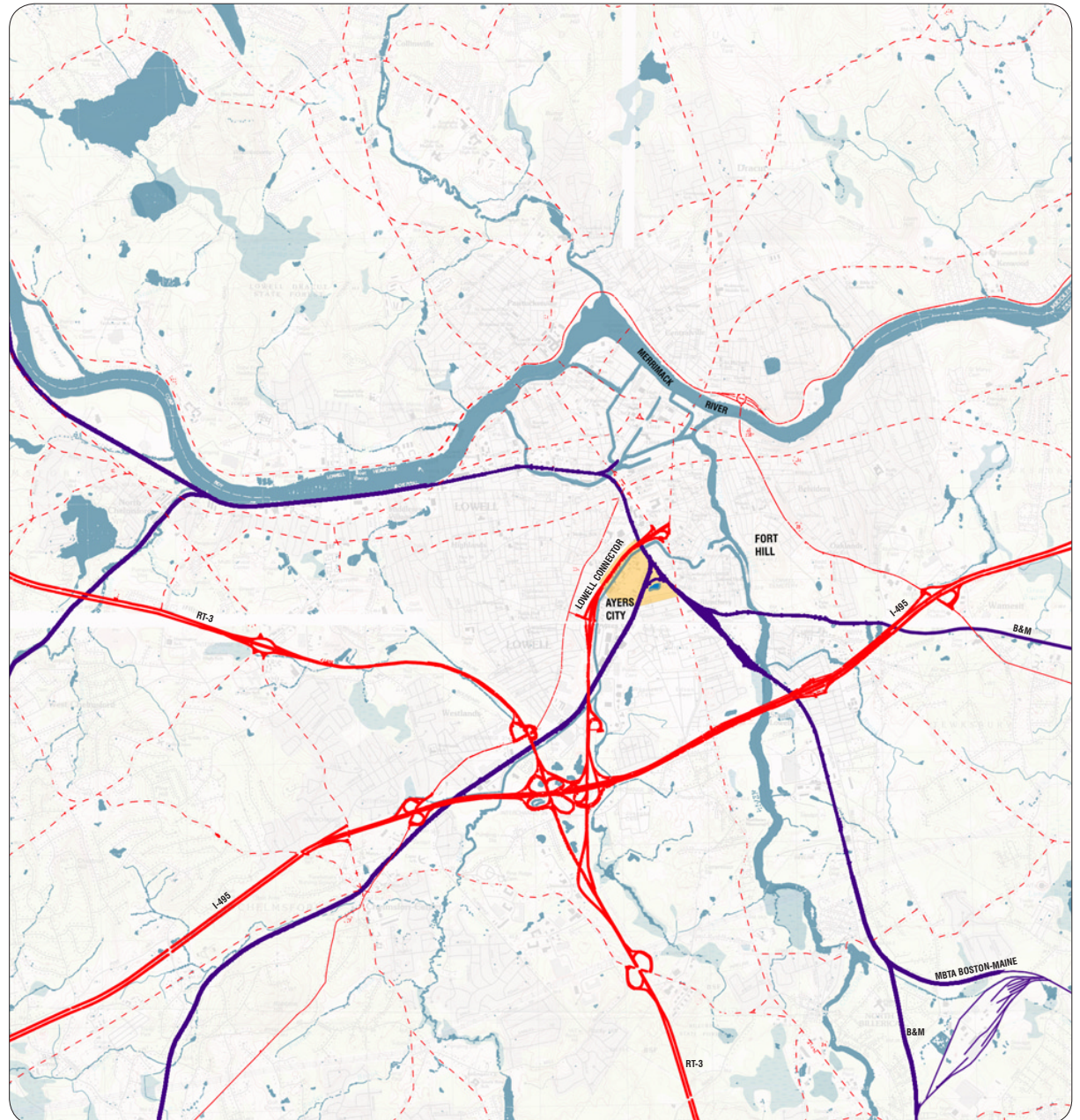
Merrimack River (dam at Pawtucket Falls)



Lowell Connector



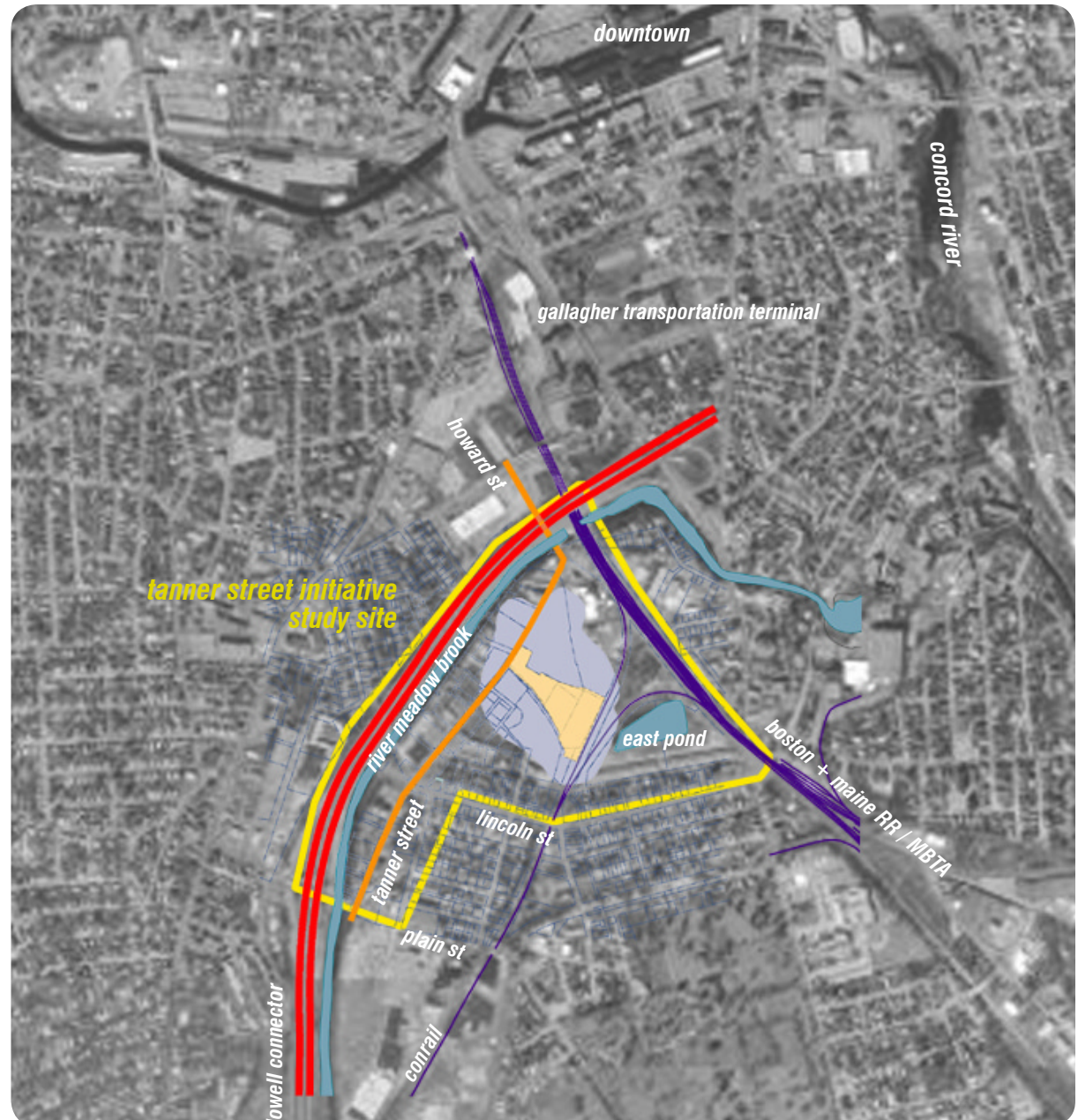
Boston & Maine / MBTA railroad corridor



1.1.3 Site Definition

The study site was defined using a variety of criteria. Since initial funding was provided through the EPA's Superfund Redevelopment Initiative, the 4.5-acre Silresim property and those adjacent properties located above the approximately 16-acre plume of contaminated groundwater were included. Yet the plume also touched or lay adjacent to important transportation corridors (Tanner Street, the Lowell Connector, and the regional rail lines) and ecological resources (the River Meadow Brook and East Pond). Thus, the study area was expanded to take into account the broader impact of these regional resources.

The study area as currently defined by the City through the planning process includes properties along both sides of Tanner Street, from Howard to Plain Streets, as well as the River Meadow Brook and Lowell Connector to the west. The study area also encompasses parcels east of the Superfund Site, west to the Boston and Maine Railroad (MBTA) tracks, and south to Maple Street. Adjacent residential uses to the south and a potential connection north to the regional intermodal transportation hub are also recognized as important contributing factors to the study.



1.2.1 Site Development

The earliest inhabitants of the area that came to be known as greater Lowell were the Pennacooks, whose range extended throughout northeast Massachusetts, New Hampshire, Maine, and Vermont. A local sub-group of the Pennacooks, known as the Wamesits, settled the area close to the intersection of the Concord and Merrimack Rivers. The Wamesits were generally a peaceful, highly developed farming community.

One of the earliest maps of the area that includes the study site was published in 1831; it indicates that the River Meadow Brook was a sinuous stream with considerable wetland buffers; the only marked development near to the brook was Hale's Mill, to the northeast. While an 1845 map indicates significant settlement and development of roads and canals in central Lowell, little other development occurred at the study site, with the significant exception of the Boston and Maine Railroad tracks, located along the corridor they occupy today.

In 1847, a real estate speculator named Daniel Ayers drew up plans for a mixed industrial and residential community in and around the area of the study site. Ayers' idea was that the industries to be located here would supply the materials and goods for the mills already operating in the center of Lowell, thus allowing the community to become largely self-sufficient. While Ayers hoped his posters and a celebratory barbecue would attract investors in tanning, lumber, glassware, and soap/candle manufacture, the speculative development was essentially a bust, with few industries actually settling prior to the 1870s. It is only by the end of the century that significant development occurred, with listings for Scannel Boiler Works, W.A. Dickinson Soaps, a carriage manufacturer, and a number of residences, as well as a significant number of railyards.

The first half of the twentieth century in Ayer's City was characterized by the build-out of a number of manufactur-

ing interests. In 1916, the environmental effects of this development first became a concern, as a report was commissioned by the State Department of Public Health to study the water quality of Hale's Brook, otherwise known as the River Meadow Brook. While the report found that water quality in the area was relatively good, it did note the objectionable quantities and types of inorganic waste and debris that were strewn about its banks and within its channel. Thus, from the start of greater concentrations of industries locating in the area, the brook and its surrounds were early subject to illicit dumping and encroachment, activities that have continued to this day.

A second significant development during the 20th century was the construction of the Lowell Connector in the 1950s, thus connecting central Lowell with the new interstate highway system. As a result of the construction, the River Meadow Brook was straightened and channelized to run immediately parallel with the highway. The new channel was characterized by steep banks, designed to contain the 100-year flood, and the elimination of buffer and wetland zones that might help to filter stormwater entering the brook. Such measures would likely have negatively impacted the quantity and diversity of wildlife along the brook.

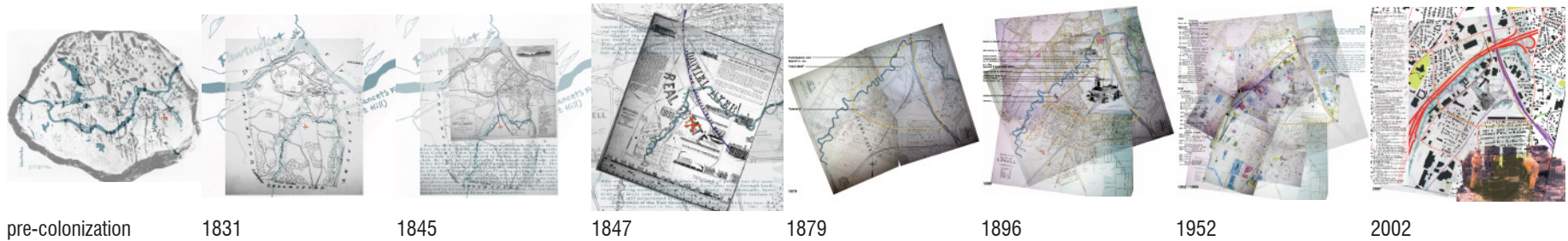
Finally, the 20th century in Ayer's City can be characterized by a general trend away from manufacturing industries (boiler, soaps, carriages) to industries of processing (iron and steel formwork, paper, waste processing), to industries of containment and storage (auto parts/junk cars, trailer storage). At the beginning of the 21st century, a significant portion of land in the Tanner Street corridor is devoted to the processing of old cars for parts and the storage of automobile skeletons, while a number of environmental processing, steel form-making, and auto body businesses persist.



colonization-era map of regional native inhabitants, on ancient carved stone from Merrimack River Valley



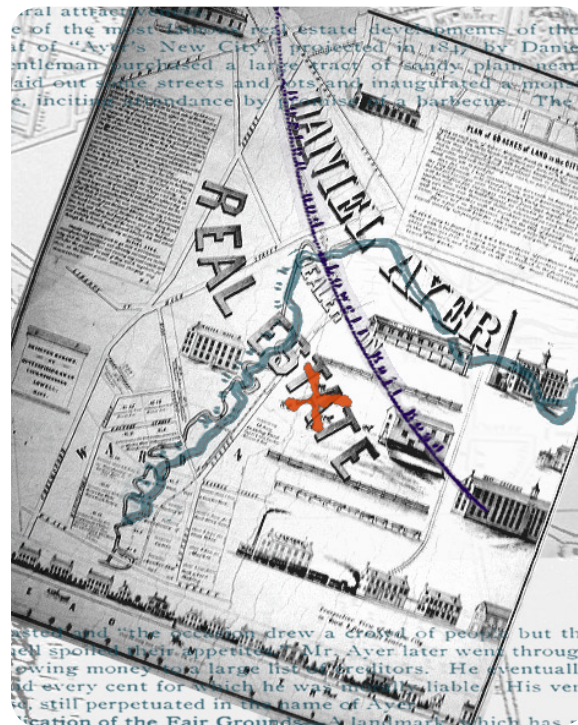
overlay of historical development, 1831-2002



functional landscape with buffer zones, flood plains > gradual growth > industry of production > processing > containment



c.1831: meandering stream, buffers; no settlement



1847: ayers city speculative proposal



c.1879: early development, w/ scannell boilerworks

1.3.1 Site Description

The Silresim Superfund Site is located at 86 Tanner Street and is the former home of the Silresim Chemical Corporation, an industrial waste processing company that went bankrupt in the 1970s after 6 years in service. While the original facility occupied a site measuring approximately 4.5 acres, the National Priorities List site is geographically defined by the extent of contamination—approximately 16 acres containing ground water contamination and seven acres of soil contamination. The former Silresim property is bordered by the Lowell Iron and Steel Company to the north, the B&M railyard and tracks to the east/northeast, an automobile salvage yard to the south, and Tanner Street to the west. The primary contaminants on site are located in groundwater and soil, though surface water and air may also be affected.

1.3.2 Groundwater Contamination

The Record of Decision (ROD) identified volatile organic compounds (VOCs) as the predominant chemical contaminants present in groundwater at the Silresim Site. The highest VOC concentrations were observed on and to the immediate north of the Silresim Property. In addition to VOCs, some semivolatile organics (SVOCs) were reported in ground water, generally at concentrations significantly less than those observed for the VOCs. Also, metals were sporadically detected in ground water at various monitoring locations. Among those metals that have been reported are chromium, nickel, zinc, and iron.

Most of the ground water plume is located in an elliptical shape stretching from the southern end of the Silresim property along a northwesterly transect to the northern end of the Lowell Iron and Steel property. A comparison of the November 1997 data with the Baseline monitoring data suggests that there is an ongoing generally northward migration of the ground water plume. Portions of the core of the plume have migrated to the north of the extraction well array on the Lowell Iron and Steel property, and appear to be moving in the direction of the City of Lowell municipal sewer lines.

1.3.3 Soil Contamination

The ROD identified a variety of VOC, SVOC, and metal contaminants in surficial soils at the Silresim property that varied depending upon site location. VOCs were relatively widespread including portions of the Silresim property, the former Arrow Carrier property (to the south of the Silresim property), and localized areas of the Lowell Iron and Steel property. SVOCs including PAHs, phthalates, PCBs, chlorinated benzenes and dioxins were elevated at the southern end of the Silresim property and portions of the Lowell Iron and Steel property. Some elevated metals concentrations were observed, primarily in the southeastern portion of the Silresim property, including arsenic, chromium, copper and mercury.

Soil volume calculations based on the reported data, indicated that an estimated 37,000 cubic yards of subsurface soil may require VOC cleanup based on comparison to ROD cleanup levels. However, considerable uncertainty remains regarding the exact outer limits of contamination (and therefore exact soil volumes).



Silresim + adjacent properties, summer 1977



removal of drums

1.3.4 Remedial Actions

Cleanup activities at the site began in 1978, when the Massachusetts Division of Water Pollution Control installed a chain link fence around the Silresim property and removed approximately 30,000 drums and tanks containing waste. Approximately one million gallons of hazardous waste were removed during this remedial action. In 1983 and 1984, the EPA demolished the existing buildings and above-ground tanks and placed a gravel and clay cap over most of the property. Crushed stone was placed over three areas of surficial soil contamination along the northern border, southern border, and northeast corner. In 1986, EPA extended the Silresim perimeter fence to enclose an area of surficial contamination in the southeastern corner of the property and placed crushed stone over surficial soil contamination.

Following the EPA's 1991 Record of Decision (ROD), a water treatment system consisting of ground water extraction wells and a treatment plant was installed on the site. The ROD anticipated a cleanup timeframe of at least 30 years.

1.3.5 Anticipated Remedial Actions

EPA is in the process of reevaluating remedial options for the site, so a detailed discussion of future remedial actions is not possible. The following summary is based on discussions with EPA and their contractors.

Capping: EPA has indicated that they intend to construct a RCRA-C (Resource Conservation and Recovery Act) landfill cap on a portion of the site. Construction of this cap will likely raise the elevation of the capped portion of the site and will result in a vegetated surface profile. EPA has indicated that they may extend the existing cover using clay or some other system to prevent direct exposure.

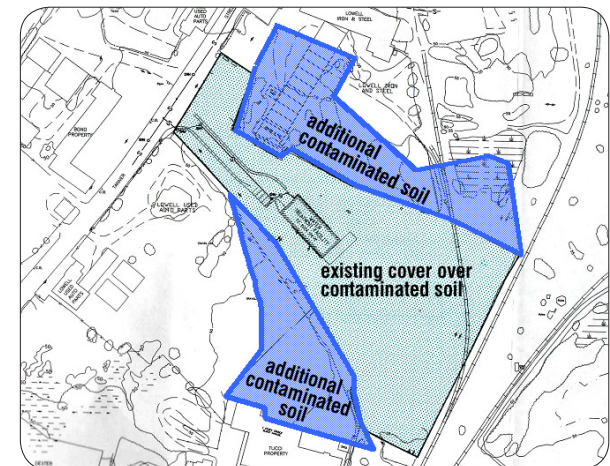
Soil Excavation: Due to the elevated contaminant levels detected by EPA in a recent sampling exercise, EPA has indicated the possibility that some of the contaminated soils may need to be excavated and consolidated under an on-site cap, or disposed off-site.

Ground Water Treatment: Clearly the ongoing ground water treatment system will continue to operate for a minimum of several years. Continued operation of this system could involve installation of new wells, abandonment of old wells, addition of new above or below ground piping and additions or modifications to the ground water treatment plant.

Six Phase Heating: EPA is performing a pilot test of this innovative technology to remove VOCs from the subsurface in soil and ground water. If successful, the implementation would involve vertical advancement of long linear electrodes into the ground, followed by operation for several weeks (or even months). After treatment of one area, the electrodes would be removed and the whole process repeated in an adjacent contaminated area.



total volatile organic compounds in shallow ground water



contaminated soil areas (locations are approximate)

1.3.6 Potential Development Restrictions

Based on the anticipated remedial activities that may occur at the site, there are several potential restrictions that were considered in developing this reuse plan.

GWTP Operations: Site reuse must consider that the ground water treatment plant is likely to be operating in the present location for several years. The ROD for the site anticipated over 30 years of ground water treatment.

Well Monitoring/Sampling/Maintenance: One of the requirements of the ROD as well as a practical requirement in this remedial strategy is long term monitoring of ground water monitoring wells in the area. This will require that the ground water monitoring wells be accessible for many years.

New Wells: Depending upon the future changes that might occur in the extent of the ground water plume, it is possible that additional ground water extraction wells might need to be installed. Future reuse of the site would need to be flexible enough to accommodate this possibility.

Piping: Currently, there is an extensive network of piping that connects the ground water extraction wells to the ground water treatment plant. Future reuse of the site must accommodate the existing piping, as well as possible new piping.

Cap Upgrade/Construction/Maintenance: There is an existing clay cap on the site and EPA anticipates installation of an additional cap on the site that could consist of multiple layers. For either cap, access for periodic inspection and maintenance is needed.

Soil Excavation: EPA is considering excavation of some surface soil from properties adjacent to the Silresim property and consolidation of these soils under an on-site cap. This would require that the affected areas be accessible in the future.

Soil Treatment: The possible six-phase radial heating process uses electrical power and temporary surface equipment, as well as subsurface installations of electrodes. In addition, site security would be required to restrict access by untrained personnel.

Indoor Air Quality: Any new on-site buildings should be designed to mitigate potential indoor air issues.

Storm Water Management: Control of storm water drainage off of the cap will need to be continued indefinitely.



water treatment plant on the silresim property



system inside of the treatment plant



view of water treatment plant (left) and surface of clay cap



extensive network of piping and wells

1.3.7 Potential Reuse Design Considerations

Given the limitations posed on site reuse by contamination, ongoing remedial activities, and anticipated remedial activities, there are several design considerations that should be incorporated into site reuse plans.

-Any structures planned for the site in the near-term should be designed as temporary or mobile with short-lifespan usage anticipated (such as parking areas, pre-fabricated buildings, etc.).

-Future reuse plans should be limited to small footprint designs (such as playgrounds, picnic areas, athletic courts, trails, ice rink, golf range, archery ranges, soccer, skate parks, etc.).

-Future reuses of the site must protect/armor site facilities (for example with landscaping, fencing, etc.).

-Separate access/entry for the reuse area should be designed to prevent access to the active portions of the site.



soil testing (typ.)



soil excavation (typ.)



well sampling (typ.)

1.4.1 Ecological Resources

Despite contamination of the Silresim property and the extensive encroachment of industrial uses, rail lines, and highways, two significant potential ecological resources exist in the Tanner Street district: the River Meadow Brook, which exists to the east of the Lowell Connector and to the west of Tanner Street; and East Pond, which exists just to the east of the Silresim property and is surrounded by railroad tracks and commercial/industrial condominiums.

1.4.2 River Meadow Brook

River Meadow Brook flows in a south-to-north direction from southwestern Lowell to the Concord River, passing along the entire western edge of the study site. River Meadow Brook's headwaters are comprised of a few small tributaries and a nutrient-rich wetland. The banks of the upper portion of the Brook are nicely vegetated, and wildlife habitat within and around the Brook seems to be intact. Efforts to minimize development impacts have been implemented within the vicinity of the upper reaches of the Brook. These include the use of porous pavement, grass swales, and water gardens for management of stormwater runoff from impervious surfaces such as rooftops, parking lots, and roads.

A straight and relatively deep channel characterizes the middle reaches of River Meadow Brook. The absence of riffle-pool sequences and meandering characteristics is likely a result of river channelization that occurred during construction of the Lowell Connector during the late 1950s and early 1960s. Riparian vegetation remains relatively intact throughout this reach of the Brook. However, some adjacent landowners have cleared vegetation from a few small portions of the bank and have either left the soil exposed or covered it with bark mulch. Stormwater runoff from adjacent impervious surface areas and direct dumping of waste are the primary causes of water quality impairment in this reach of the Brook. Furthermore, large amounts of debris (i.e. tires, shopping carts, wood pallets) are scattered throughout the Brook.

Immediately downstream of the study site (past Howard Street), the Brook enters a culvert as it travels under the railroad tracks, reemerges as a well vegetated stretch of river, discharges over a grade control structure then travels under route 3A. Just downstream of route 3A, River Meadow Brook narrows and becomes more sinuous as it flows through a residential area. Overhanging trees are shading the riffle-pool sequences that exist within this section of the Brook. There are no obvious direct contributors to water quality impairment throughout this section, suggesting that any water quality problems are a result of upstream activities.

The final section of River Meadow Brook flows through an industrial complex and passes under a couple of large brick buildings, then reemerges into a vegetated area with overhanging trees. Shopping carts, tires, and other debris litter this lower portion of the Brook. The area where the Brook enters the Concord River appears to be a popular fishing area.



ecological resource plan



small tributary comprising headwater of the brook



porous pavement parking at upper stream



straight and relatively deep section of the brook



culverted section of River Meadow Brook

The primary issues associated with water quality, habitat, and aesthetic impairment in River Meadow Brook include the following:

- unmanaged stormwater runoff,
- direct dumping of waste,
- absence of riparian vegetation,
- sedimentation, and
- large amounts of debris, such as tires, shopping carts, and other industrial waste.

Also, encroachment beyond private property lines and into the brook's right-of-way has occurred, most notably in the form of piles of scrap automobiles hanging precipitously over the edge of the bank.

Opportunities for water quality, habitat, and aesthetic enhancement in River Meadow Brook include the following:

- management of stormwater runoff (porous pavements, vegetated buffers, wetland terraces),
- reestablishment of riparian buffer,
- enforcement of legal boundaries of the brook right-of-way by local and state officials, and
- removal of debris and sediment build-up.



River Meadow Brook enters into Concord River

1.4.3 East Pond

East Pond is a groundwater-fed pond located to the east of the Silresim property. East Pond is entirely surrounded by vegetation (trees, shrubs, grasses, and wildflowers) and serves as a habitat for reptiles and insects (observed). Water quality issues associated with the pond include the following:

- low water levels,
- overgrowth of aquatic vegetation at certain times of the year, and
- the presence of debris such as tires and a baby pool.

The greatest ecological opportunity associated with East Pond is its potential as a catchment basin for stormwater runoff from the adjacent power plant and residential areas. Increased flow to the pond would provide increased water levels, which would help to reduce the current adverse effects associated with low water levels (i.e. high temperatures, high nutrient content). In addition, the site holds great potential as an open space, recreational, and visual amenity for nearby residents.



heavily vegetated buffer around East Pond



illegal dumping at East Pond

1.5.1 Site Inventory

The Tanner Street Corridor is ideally sited with regard to highway access and visibility, adjacent to the Lowell Connector and with direct connections via Plain Street or via Howard Street and Hale Street. It also has good access to the Boston and Maine Railroad tracks, as well as two spurs that connect to the southwest (only the eastern of which is currently active, and only once a month).

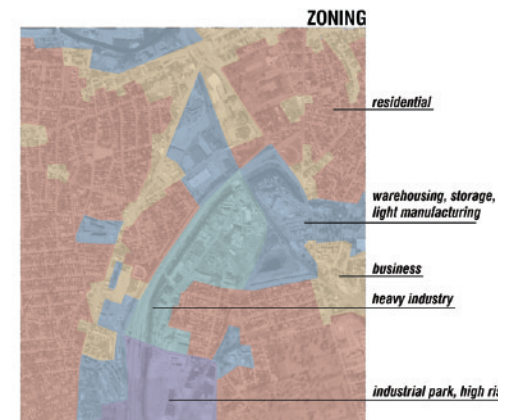
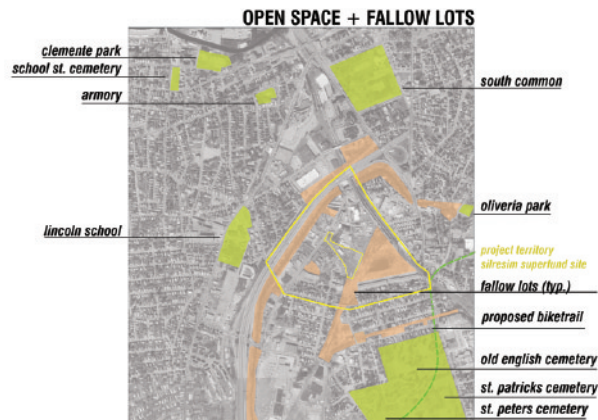
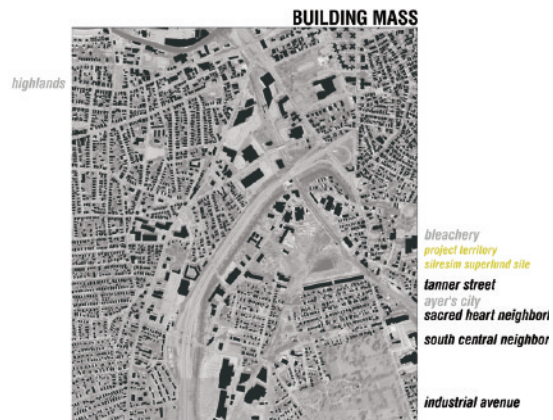
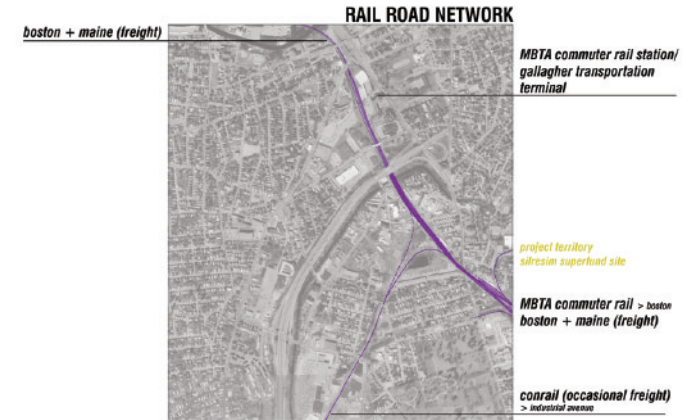
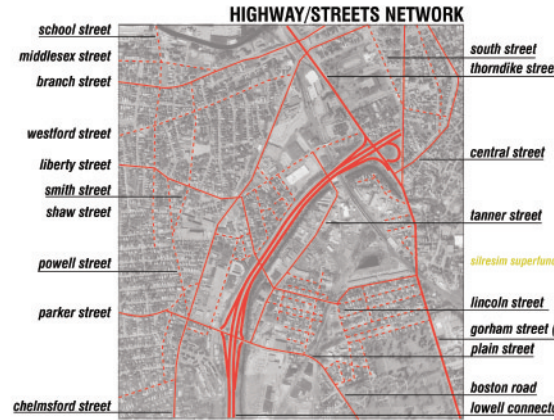
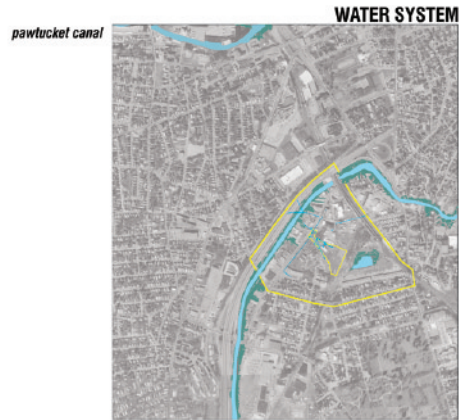
Much of the district is zoned for heavy industry, one of the few such remaining designations in the city. Exceptions to this include the area around east pond, which is zoned for warehousing and light manufacture, and much of the area south of Maple and Canada Streets, which is zoned as residential. Few of the current businesses along Tanner Street fit within the heavy industry category, and efforts to located new heavy industries (such as a trash transfer station) have been repelled by active neighborhood groups. Also of note is the industrial park high-rise zone to the south of Plain Street, created in the 1980s to take advantage of potential development opportunities at a major gateway to Lowell.

The buildings along Tanner Street can be characterized as low-rise with medium-size footprints, set on lots with considerable non-building space devoted to parking, processing, and storage. Most of the lots are developed with buildings along Tanner and Canada Streets, with few buildings in the less-accessible areas further to the east.

The River Meadow Brook and East Pond constitute two significant but largely inaccessible ecological resources, buffered by vegetated and fallow areas.

According to the City's most recent recreation and open space plan, the residential areas in and to the south of Ayer's City lack critical passive and active open spaces, with only walking opportunities offered by the area's numerous cemeteries.





1.5.2 Current Uses

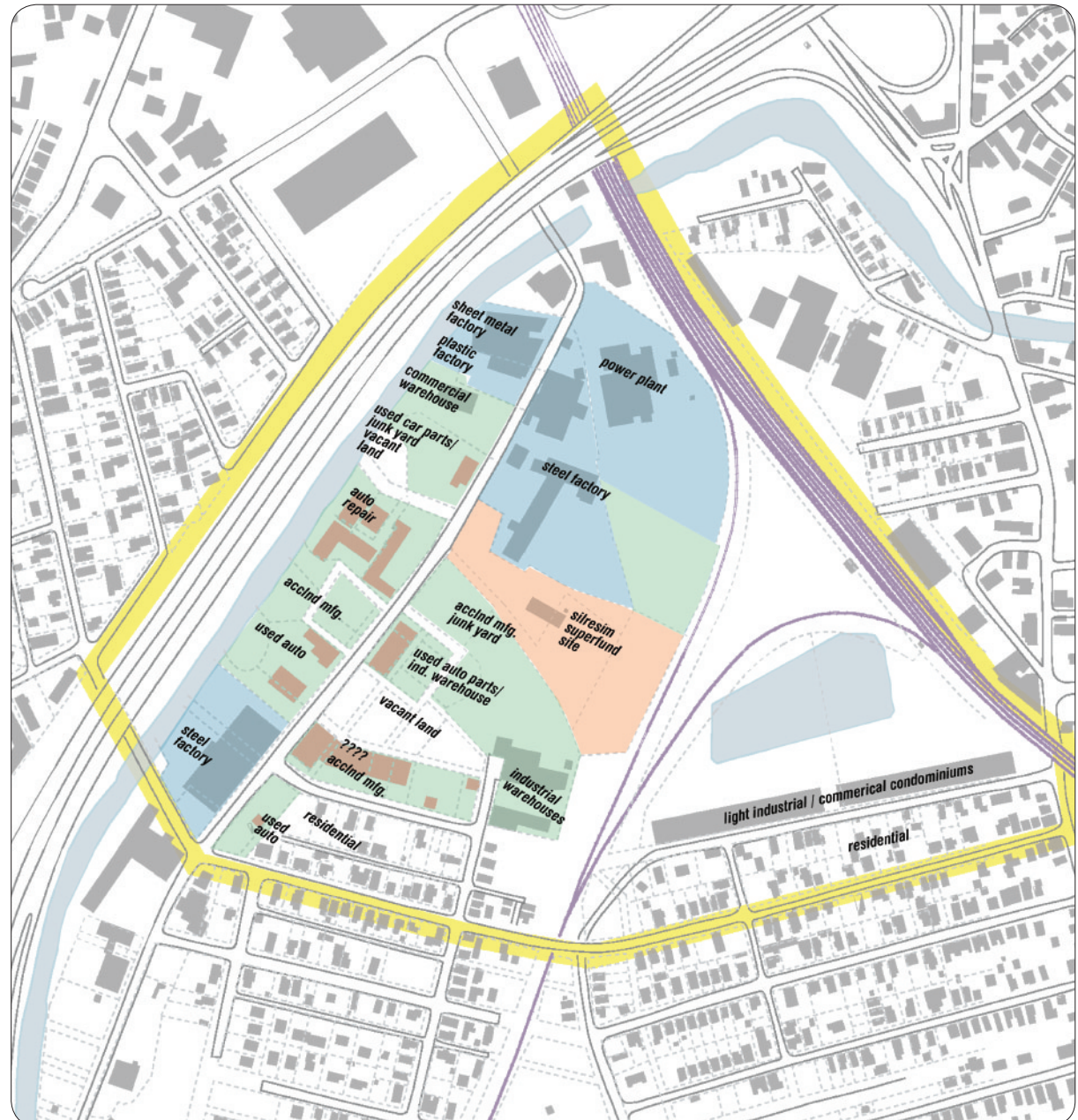
Uses along the west side of Tanner Street, from north to south, include the following:

- (Howard Street)
- environmental services
- sheet metal factory
- plastics factory
- commercial warehouse
- used auto parts / junkyard
- (Cambridge Street ROW)
- auto repair
- unknown
- accind mfg. (open industrial land) / junkyard
- used auto / junkyard
- steel factory
- (Lincoln Street)

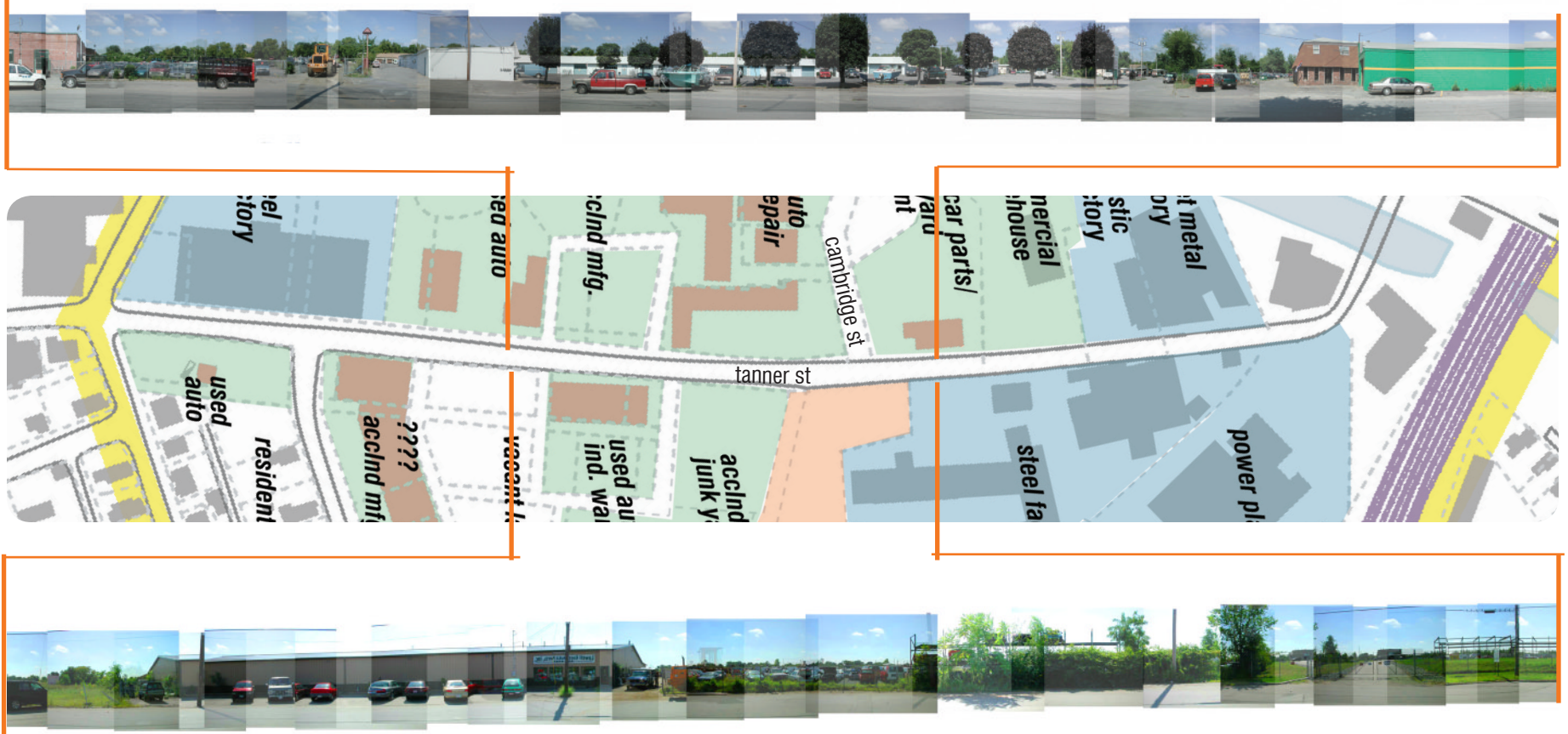
Uses along the east side of the Street, from north to south, include the following:

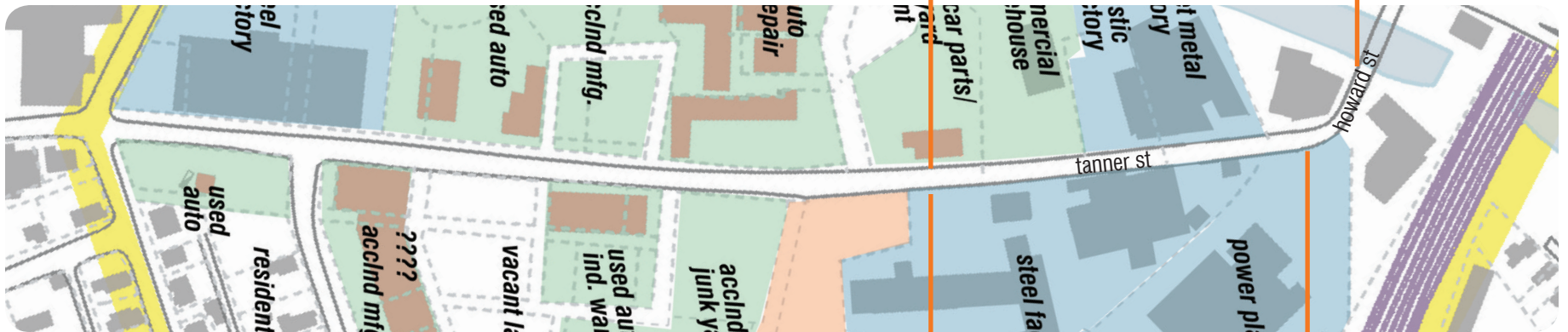
- (ROW, extension of Howard Street)
- power plant
- steel factory (tractor trailer storage behind)
- Silresim property
- accind mfg. (open industrial land) / junkyard
- used auto parts / junkyard
- office / storage (industrial warehouses behind)
- accind mfg. (open industrial land) / sheet metal manufacture, paint mixing
- (Canada Street)
- used auto / junkyard
- (Lincoln Street)

The triangular zone between the railroad spurs west of the Silresim property includes some area devoted to tractor trailer storage. Light industrial / commercial condominiums occupy the length of Maple Street, separating East Pond from residential areas.









1.5.3 Current Activity

The shift away from industries of production to industries of processing and storage have significantly changed the type of activity taking place along Tanner Street. Since the mid-twentieth-century decline in the railroads and the corresponding rise of the interstate highway system, most of the businesses are served by tractor-trailer trucks along Tanner Street; this accounts for much of the positive activity occurring in the district. The processing of junk cars for spare parts is the next significant activity factor, as shovels and scoops of all types can be seen moving cars around various junkyards. But while new businesses like UAE Lowell Power have made efforts to create visually interesting building complexes, most of the street is characterized by a lack of activity, which could contribute to generally negative public perceptions of the district.



trailer storage yard



industrial traffic at tanner street



power plant



used automobile parts and salvage yard

1.5.4 Perception

The Tanner Street District suffers from widespread negative perceptions, according to interviews and surveys conducted with a broad cross-section of City officials, business and community leaders, and private citizens. These perceptions can be traced to the prevalence of a number of conditions in the district:

- a large number of junkyards and stacks of car skeletons
- numerous blank walls
- abandoned buildings
- considerable illegal dumping in the brook and streets
- real and perceived dangers relative to contamination

These perceptions are exacerbated by the area's visibility from the Lowell Connector, especially in the winter, which may result in a "carry-over" effect relative to the entire city. Changing the image of the district and, by extension, public perceptions should be a short-term priority.



salvage yard



typical empty wall of industrial building



abandoned industrial building



trash in River Meadow Brook



fenced-off Superfund site

1.5.5 Land Availability

Short of widespread land-taking efforts by the City, which few people would support and for which the City has no resources, initial actions in the Tanner Street district must necessarily be limited to publicly held lands and rights-of-way, including the brook corridor, the Lowell Connector, and all public extant and “paper” streets. In addition, though, a number of other opportunities exist for short- and medium-term action:

1. The City should move on purchasing the 4.5-acre Silresim property, currently in tax arrears and owned by a trust established by the Silresim Chemical Corporation, in order to gain decision-making authority over the parcel and to position itself to reap potential economic benefits as the remediation effort is successfully completed.
2. The City should also begin negotiations with the owners of the railroad rights-of-way, in order to gain full- and partial-use rights; these existing corridors can play a significant role in establishing direct connections between the residential areas of southern Lowell and the center of town.
3. The mostly vacant and under-utilized land around and to the north of East Pond represents significant potential economic and ecological resources. The City should begin negotiations with owners of those parcels for land swaps (where necessary) and provide assistance with local business relocations (from the condominiums along Maple Street) in order to implement long-term goals for the district and for the City at large.
4. Finally, a number of smaller properties along Tanner Street remain in tax arrears. The City should negotiate buy-out agreements with existing and new business owners in order to facilitate short-term business relocations and long-term private business expansion and redevelopment.

